The season has been a good one for collecting at Eastport. Some of the rare forms, like *Lunatia grænlandica* and *Bela Pingelii*, were found at 15 fathoms, and on the whole, there was a tendency among the deep water forms to the shallower water.

## THE HABITS OF FLORIDA LITTORAL MOLLUSKS.

## BY JOSEPH WILLCOX.

Although the following facts may be well known to some Conchologists, there are many undoubtedly who have not had the opportunity of observing the habits of southern shells. It is a very interesting scene to witness the actions of many mollusks in the shoal waters in the bays of Florida, and on the sand flats that are exposed to the air at low tide. Below is a list of some of the shells that are found above the water level at low tide on the southwest coast of Florida:

Fulgur perversum,
F. pyrum,
Oysters,
Oliva literata,
Fasciolaria gigantea,
F. tulipa,
F. distans,
Cerithium atratum,
C. nigricans,
C. muscarum,
Cerithidea scalariformis,
Lucina Floridana.

Aplysia,
Sigaretus perspectivus,
Callista gigantea,
Nassa vibex,
Marginella apicina,
Melongena corona,
Conus proteus,
C. Floridanus,
Cardium isocardia,
Cardium magnum,
C. muricatum,

Aplysias do not remain voluntarily out of water at low tide, as they then become dry on the surface and appear to suffer for want of water, often emitting in such cases a large amount of purple fluid. They possess no power of locomotion on land.

The Cerithium usually crawl about on the sand soon after the water has receded, and remain above the surface until the return of

the tide. Their tracks may often be traced more than twenty feet.

Cerithidea scalariformis habitually crawls up the stems of grass, and lives the greater portion of the time out of water.

The Cerithium nigricans live in large colonies between high and low water marks.

Cardium isocardia crawls out of the sand soon after the water disappears: but they do not travel far. When put in a basin of salt water, they often close their shells with a lively snap.

Fasciolaria distans is the only shell, observed by the writer, which feeds upon the Vermetus nigricans colonies, into the tubes of which it inserts a long proboscis.

Fasciolaria tulipa is the only shell, in the knowledge of the writer, which makes an effort for freedom when held in the hand. It projects its body out of the shell and "slashes" about its long and sharp operculum with sufficient force to occasionally bring into view some of the blood of its captors.

The *Oliva literata* often lives in colonies. It emerges from the sand soon after the disappearance of the water, and crawls for a considerable distance.

Sigaretus lives usually under the sand, but at low tide it often comes to the surface; but it does not proceed far. It is a favorite morsel for the "littoral pigs," who root it out of the sand with avidity.

Lucina jamaicensis affects the muddy sand. They lie deeply buried under the surface, and seldom are seen on top of the mud. The Lucina tigrina probably possesses the same habit, as many dead shells are found in places where few are seen living.

The *Pholas costata*, I presume, lives below low water mark, as their shells are washed ashore in some places in great quantities. They also live in colonies in the muddy sand flats that are dry at low tide.

The shell reposes about 10 to 12 inches below the surface, but the animal can project its long siphon to the surface, through a hole permanently kept open.

In a future article we propose giving the results of observations upon the feeding habits of some Florida mollusks.